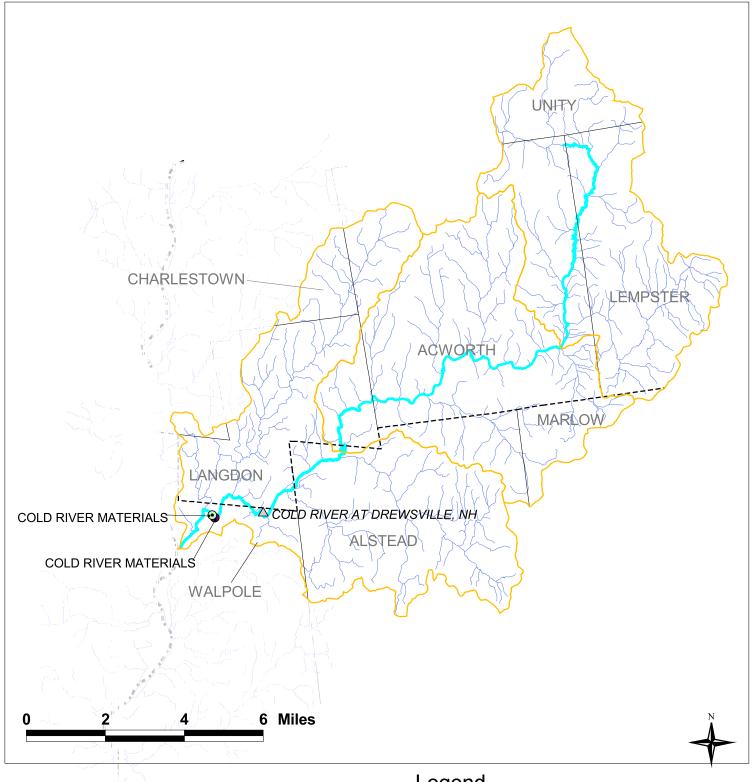
#### Cold River Annual Water Use versus Stream Flow – Calendar Year 2003

The Cold River Water Management Planning Area (WMPA) covers 102 square miles. A surrogate gage (USGS 01154000 SAXTONS RIVER AT SAXTONS RIVER, VT) was used in conjunction with historical data from the USGS 01155000 COLD RIVER AT DREWSVILLE, NH gage to define streamflow on the Cold River for 2003. The Saxton River gage measures 72.2 square miles and has collected daily streamflow data since 1940. The Cold River gage at Drewsville measured 82.7 square miles of the Cold River WMPA from 1940 to 1978. Streamflow data from the gage at Drewsville was adjusted by linear regression of data from both gages to simulate data for the Cold River gage for 2003. This process is described in the main report. The 7Q10 value was taken from a published USGS report (WRI 02-4298).

There were no months when the General Standard was exceeded.

The Cold River Water Management Planning Area has one Affected Water User with one impact point on the Designated Reach, which is Cold River Materials. Cold River Materials registered one source and one discharge on the Designated River; however no data were reported for the discharge in 2003. Water use by the facility has changed from gravel washing to use only for dust suppression on roads. The source is a cistern at the edge of the Cold River. Reported water use in 2003 occurred only in April, May, June and August.

### **Cold River Affected Water User Facilities: Source and Discharge Locations**



The coverages presented are under constant revision as new sites or facilities are added. They may not contain all of the potential or existing sites or facilities. NHDES is not responsible for the use or interpretation of this information. Not intended for legal purposes. Water users database last updated January 2004.

h:\water quality\instream flow\gisprojects\wmpa\Cold\_waterquality.apr

Map produced January 28, 2004

### Legend

Affected Water Users

- $\odot$ Source
- Discharge

Stream Gages

- Active
- Δ Inactive



**Designated Reach** 

Hydrology

**WMPA** 



State boundary



Town boundary



#### 2003 Cold Water Use in CFS

DA on DR WUSD\_ID MAY JUN USERNAME FACILITY (SQ MILE) JAN FEB MAR APR JUL AUG SEP OCT NOV DEC End of Designated Reach
LANE CONSTRUCTION CORP COLD RIVER MATERIALS 20216 20216-S01 5.69 99.04 0.000 0.000 0.000 0.000 0.0045 0.037 0.000 0.000 0.0046 0.000 0.000 0.000 Start of Designated Reach Start of Designated Reach 101.60

#### 2003 Cold Aggregate Water Use in CFS

2000 0014 11551 05410 114	ter ese in ers														
			DA on DR												
USERNAME	FACILITY	WUSD_ID	(SQ MILE)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
End of Designated Reach		End of Designated Reach	5.69	)											
LANE CONSTRUCTION CORP	COLD RIVER MATERIALS	20216 20216-S01	99.04	1 0.000	0.000	0.000	0.000	0.0045	0.037	0.000	0.000	0.0046	0.000	0.000	0.000
Start of Designated Reach		Start of Designated Reach	101.60	0.000	0.000	0.000	0.000	0.0045	0.037	0.000	0.000	0.0046	0.000	0.000	0.000

#### 4. Table of Estimated Monthly Stream Flows and General Standard Values

# USGS 01155000 COLD RIVER AT DREWSVILLE, NH from USGS 01154000 SAXTONS RIVER AT SAXTONS RIVER, VT data

DA(mi<sup>2</sup>) 82.7 7Q10 (cfs) 4.18

	Monthly mean of daily streamflows (2003) in cfs for surrogate gage at Saxton River VT	Calculated monthly mean for Cold River at Drewsville	Mean of monthly means for Cold River 1940-1978 (cfs)	Median of monthly means for Cold River 1940-1978 (cfs)	Calculated 2003 monthly mean streamflow in CFSM	General Standard in cfsm
Jan-03	93	91	93	80	1.10	0.04
Feb-03	92	90	92	70	1.09	0.04
Mar-03	426	408	218	203	4.93	0.16
Apr-03	367	352	400	376	4.26	0.16
May-03	164	159	181	163	1.92	0.04
Jun-03	80	79	79	61	0.96	0.02
Jul-03	27	29	34	24	0.34	0.0025
Aug-03	214	207	26	16	2.50	0.04
Sep-03	115	112	28	19	1.36	0.04
Oct-03	241	232	51	26	2.80	0.04
Nov-03	264	254	105	73	3.07	0.04
Dec-03	337	323	109	81	3.91	0.04

	Coefficients
Intercept	2.69486604
X Variable 1	0.95097513

Using POR average streamflow for this month
Using POR average daily streamflows for part of this month

## 2003 Cold Estimated Monthly Stream Flow at Each Impact Point in CFS

USERNAME	FACILITY	WUSD_ID
End of Designated Reach		End of Designated Reach
LANE CONSTRUCTION CORP	COLD RIVER MATERIALS	20216 20216-S01
Start of Designated Reach		Start of Designated Reach

Estimated												
2003 monthly												
mean												
streamflow in												
CFSM	1.10	1.09	4.93	4.26	1.92	0.96	0.34	2.50	1.36	2.80	3.07	3.91
DA on DR												
(SQ MILE) JAN	FEB	MAR	APR	MAY	/ JUN	JUL	AUG	SEP	OCT	NOV	DEC	
5.69	6	6	28	24	11	5	2	14	8	16	17	22
99.04	109	108	488	421	190	95	34	247	134	278	304	387
101.60	112	111	501	422	105	07	25	254	120	205	212	207

### 2003 Cold Estimated Monthly General Standard at Each Impact Point in CFS

USERNAME	FACILITY	WUSD_ID
End of Designated Reach		End of Designated Reach
LANE CONSTRUCTION CORP	COLD RIVER MATERIALS	20216 20216-S01
Start of Designated Reach		Start of Designated Reach

General Standard in cfsm	0.04	0.04	0.16	0.16	0.04	0.02	0.0025	0.04	0.04	0.04	0.04	0.04
DA on DR (SQ MILE)	JAN FE		ИAR API		MAY JUN			AUG SEP	OCT			EC
5.69	0.23	0.23	0.91	0.91	0.23	0.11	0.01	0.23	0.23	0.23	0.23	0.23
99.04	3.96	3.96	15.85	15.85	3.96	1.98	0.25	3.96	3.96	3.96	3.96	3.96
101.60	4.06	4.06	16.26	16.26	4.06	2.03	0.26	4.06	4.06	4.06	4.06	4.06

# Aggregate Water Use Below the General Standard

Standard															
			DA on DR												
USERNAME	FACILITY	WUSD_ID	(SQ MILE)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
End of Designated Reach		End of Designated Reach	5.69	0.23	0.23	0.91	0.91	0.23	0.11	0.01	0.23	0.23	0.23	0.23	0.23
LANE CONSTRUCTION CORP	COLD RIVER MATERIALS	20216 20216-S01	99.04	3.96	3.96	15.85	15.85	3.96	1.94	0.25	3.96	3.96	3.96	3.96	3.96
Start of Designated Reach		Start of Designated Reach	101.60	4.06	4.06	16.26	16.26	4.06	1.99	0.26	4.06	4.06	4.06	4.06	4.06



